

AD-A240 210

(2)

A Shield of Blows or Rubber Dagger:
An Analysis of an Operational Concept for NATO
after Forward Defense

A Monograph
by
Major Mark R. French
Armor



DTIC
ELECTED
SEP 13 1991
S B D

School of Advanced Military Studies
United States Army Command and General Staff College
Fort Leavenworth, Kansas

Second Term 90-91

Approved for Public Release; Distribution is Unlimited

91-10425



REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)			2. REPORT DATE <i>12 May 1991</i>		3. REPORT TYPE AND DATES COVERED <i>Monograph</i>		
4. TITLE AND SUBTITLE <i>SHIELD at Blows or Rubber Dogger. An Analysis of an Operational Concept for NATO after Forward Defense (U)</i>			5. FUNDING NUMBERS				
6. AUTHOR(S) <i>Major Mark P. French</i>							
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <i>School of Advanced Military Studies AHU-ATZL - Secu Fort Leavenworth, KS 66027-6900 Carr (913) 684-3437 Admcon 652-3437</i>			8. PERFORMING ORGANIZATION REPORT NUMBER				
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSORING/MONITORING AGENCY REPORT NUMBER				
11. SUPPLEMENTARY NOTES							
12a. DISTRIBUTION/AVAILABILITY STATEMENT <i>Approved For Public Release, Distribution Unlimited</i>				12b. DISTRIBUTION CODE			
13. ABSTRACT (Maximum 200 words) <i>See Attached</i>							
14. SUBJECT TERMS <i>Forward Defense LOTO Post Cold War Europe NATO Positional Defense Operational Concept</i>				15. NUMBER OF PAGES <i>53</i>		16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT <i>UNCLASSIFIED</i>		18. SECURITY CLASSIFICATION OF THIS PAGE <i>UNCLASSIFIED</i>		19. SECURITY CLASSIFICATION OF ABSTRACT <i>UNCLASSIFIED</i>		20. LIMITATION OF ABSTRACT <i>Unlimited</i>	
NSN 7540-01-280-5500							

SCHOOL OF ADVANCED MILITARY STUDIES
MONOGRAPH APPROVAL

Major Mark R. French

Title Of Monograph: Shield of Blows or Rubber Dagger?

An Analysis of an Operational Concept for NATO after Forward Defense

Approved by:

LTC James M. Dubik, MA

Monograph Director

LTC James M. Dubik, MA

James R McDonough
COL James R. McDonough, MB

~~James F. McDonough~~

Director, School of
Advanced Military
Studies

Philip J. Brookes

Philip J. Brookes, Ph.D

Director, Graduate
Degree Program

Accepted this 15th day of May 1991

ABSTRACT

Shield of Blows or Rubber Dagger? An Analysis of an Operational Concept for NATO After Forward Defense.

Changes in the European community in the last year are the most dramatic since the end of World War II. Political changes in the Soviet Union and emerging democratic movements in Eastern European countries signal the accelerated development of a new European, and world, order. Changes for NATO focus on an array of political, economic, and military issues. With in the context of this changing environment, the purpose of this monograph is to answer following the question: what is a viable operational concept for the conventional defense of NATO in the Central Region after forward defense?

This monograph shows how forward defense made sense given the strategic situation, ends, means, ways, and risk of the Cold War era. Then, given the same criteria, this study identifies the need for a replacement operational concept. Next, requirements for NATO's new operational concept are drawn from the analysis and measured against a possible replacement concept, resilient defense.

Resilient defense is offered as a possible replacement operational concept. Not officially sanctioned by any government or organization, resilient defense is a term given to a concept characterized by its flexibility, concept of belts for force disposition, multinational corps, and attempts to address NATO's changing environment.

This study concludes that resilient defense can provide NATO a viable operational concept in a time of great transition and uncertainty. There are however shortcomings in the resilient defense operational concept which must still be addressed. Those issues include NATO's potential out of area requirement, interoperability of multinational corps, and increased reliance on reserve forces. In light of forward defense's obsolescence, NATO would benefit from adopting resilient defense or a like concept.

Table of Contents	Page
I. Introduction.....	1
II. Theoretical Considerations of Operational Art...	4
III. Forward Defense.....	9
IV. An Alternative Operational Concept.....	22
V. Conclusions and Implications.....	38

Figures:

1. Ends, Means, Ways, and Risk	8
2. Forces IN The Extended Central Zone - PRE CFE.....	15
3. AFCENT Corps Sector.....	17
4. Evolution of Forward Defense.....	18
5. CFE Limits.....	30
6. Resilient Defense Graphic.....	34
7. Requirements For NATO's New Operational Concept.....	39
 Endnotes.....	 46
Bibliography.....	51

Accession For	
NTIS SPA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unpublished	<input type="checkbox"/>
Classification	
Disposition	
Availability Codes	
Print. and/or Dist. Special	
A-1	



I. INTRODUCTION

Changes in the European community in the last year are the most dramatic since the end of World War II. Political changes within the Soviet Union and emerging democratic movements in Eastern European countries signal the accelerated development of a new European, and world, order. Reduced defense budgets and the continued march toward the European Community (EC) are realities of a post bi-polar world. Changes in the political and economic environment are coupled with changes in the military environment.

Foreign and defense ministers of the Warsaw Pact Treaty Organization (WTO) met in Budapest, Hungary, on February 25th, 1991 to formally and unceremoniously end the 35-year-old Warsaw Pact.¹ Recent Soviet unilateral force draw downs combined with the Conventional Armed Forces in Europe Treaty (CFE), if ratified, will create new regional security possibilities. Changes in regional security requirements pose questions for the United States in terms of reassessing our national military strategy.

Changes for the United States and our North Atlantic Treaty Organization (NATO) allies focus on an array of political, economic, and military issues. Key to the purpose of this paper, within the context of the ongoing geopolitical changes, is this: an analysis of

one of the military aspects of these changes, specifically the conventional defense of NATO's Central Region. The Soviet threat to US and NATO interests in Western Europe has reduced significantly. In addition, the means which NATO had at its disposal to address that threat is also undergoing a change, and this change is being institutionalized by the CFE treaty. However, NATO will continue in its current configuration and purpose, at least for the near term of 5-10 years. This monograph addresses the changing European environment by answering the following question: what is a viable operational concept for the conventional defense of NATO in the Central Region after forward defense? The monograph begins with selected theoretical principles of operational art. The principles selected provide a physical and conceptual framework for analysis. In addition, this section defines the criteria to be used throughout the monograph: strategic situation, ends, means, ways, and risk. These criteria facilitate the comparison of the current operational concept of forward defense and the proposed operational concept of resilient defense.

The historical section explains how the concept of forward defense evolved during the post World War II period. The criteria listed above serve as the elements of analysis. The results of this analysis

forms the basis of comparison with forward defense and the operational concept of resilient defense, the alternative to forward defense that this monograph analyzes. The final section provides conclusions based upon the analysis and highlights relative risk if resilient defense were adopted.

Before proceeding, a note of caution to the reader is in order. The term "resilient defense" is a term given to a concept not yet accepted or endorsed by any government or military establishment. Many of the issues within the comparative analysis of this monograph are in transition. Events in eastern Europe and the Soviet Union, as well as within NATO countries themselves, continue to demonstrate the unpredictable nature of great change. An additional major, ongoing change in the NATO arena concerns nuclear weapons. This monograph will not address nuclear weapons except to underscore that whatever strategic situation results in Europe, a nuclear "umbrella" of some sort will remain as part of any conventional strategy. The new world order is by no means defined.

The significance of these changes is far-reaching, particularly in terms of our ability to protect U.S. national interests and those of NATO. The approach taken by the U.S. and NATO to protect these interests is, in part, based on theoretical concepts of

operational art. Therefore, a brief discussion of selected aspects of operational art provides a framework for comparison of the operational concepts.

II. THEORETICAL CONSIDERATIONS OF OPERATIONAL ART

A good point of departure in understanding the concept of operational art is to address the three levels of war: strategic, operational, and tactical. The first interface between national policy objectives and military action occurs at the strategic level. At this level of war, a nation or alliance applies elements of national power toward the attainment of security objectives.² The application of military power in the attainment of specified objectives occurs at the operational level.

The operational level of war sets the conditions and provides the means for tactical actions to attain military strategic objectives. The operational level is the middle ground between strategy and tactics. Further, this is "the level of war at which campaigns and major operations are planned, conducted, and sustained to accomplish strategic objectives within theaters or areas of operations."³ Forward defense and any replacement concept must be able to facilitate this strategic-tactical linkage.

- The operational level of war exists between

strategy and tactics. FM 100-5 states that operational art is "the employment of military forces to attain strategic goals in a theater of war or theater of operations through the design, organization, and conduct of campaigns and major operations."⁴

Clausewitz maintained the art is "the employment of the available means for the predetermined end."⁵

The tactical level of war is the lowest level among the three. At the tactical level, weapons are brought to bear and the effects of weapon systems are dominant. The tactical level is where creation of desired conditions provide for the success at the operational level. This level of war is where battles and engagements are planned and executed. Action at this level focuses on the ordered arrangement and maneuver of combat elements in relation to each other and to the enemy to achieve combat objectives.⁶ These theoretical concepts explain the operational concepts used as the criteria to compare the forward defense and resilient defense operational concepts, and to analyze the latter.

Certain theoretical constructs transcend the discussion of levels of war. Chief among them are the elements of ends, means, ways, and risk. Any operational concept is bound by them. These are the key elements of criteria this monograph uses for

comparison of the two operational concepts.

The *END* is the clear and complete visualization of an end state toward which all military action is directed.⁷ Thus, James Schneider states that "a military end is feasible if the means available can support the attainment of that end. Thus the friendly means available must be greater than the enemy means opposed."⁸ From this, one should not draw the implication that one can never fight out numbered and win. History has shown this not to be true. Rather the point is that an unfavorable imbalance in means is not desireable when one is assessing the chances for attaining the desired end.

MEANS comprise the aggregate combat power available to the commander. In basic form, means are air, ground, naval, and space forces available to the commander which include combat, combat support, and combat service support units. Moreover, means include time and space, as well as logistics and elements from the moral domain of battle.⁹ For the purpose of this monograph, the focus will be on the conventional force levels in the Central Region. The rationale for this limiting factor is simply because they are the most visible, and arguably, the most likely to be used against any physical threat to NATO countries. The means employed by the commander in the conduct of a

campaign are influenced, both positively and negatively, by the ways.

The WAYS are the application of the means at hand to achieve the desired end. The application must be feasible and suitable. A way is feasible when the way contributes to the capability of a concept being carried out. A way is suitable if the members of the alliance can apply it toward their purpose or end.

That is to say, "a suitable method will be determined by the means available in relation to the end sought."¹⁰ At the joint and combined level, operational art can prove to be extremely difficult as agreement among partners in a coalition with different equipment and doctrine is often an insurmountable task. The final element of criteria, risk, is the least measurable yet the most menacing.

RISK is a shortfall, and risk occurs exponentially when the means may not support the end. In the course of a well planned campaign there are an infinite number of reasons why means do not support the end.

Clausewitz may have put it best when he said "everything in war is very simple, but the simplest thing is difficult."¹¹ That is to say that in war there are unforeseen incidents that disrupt and confuse the applications of means toward achieving the end; this is friction.

Friction is a catalyst for risk and is inevitable. A commander will always be required to deal with varying degrees of risk, he must however develop plans to contend with friction.¹² A graphic portrayal of risk and its relationship to the other elements of criteria is shown in figure one.

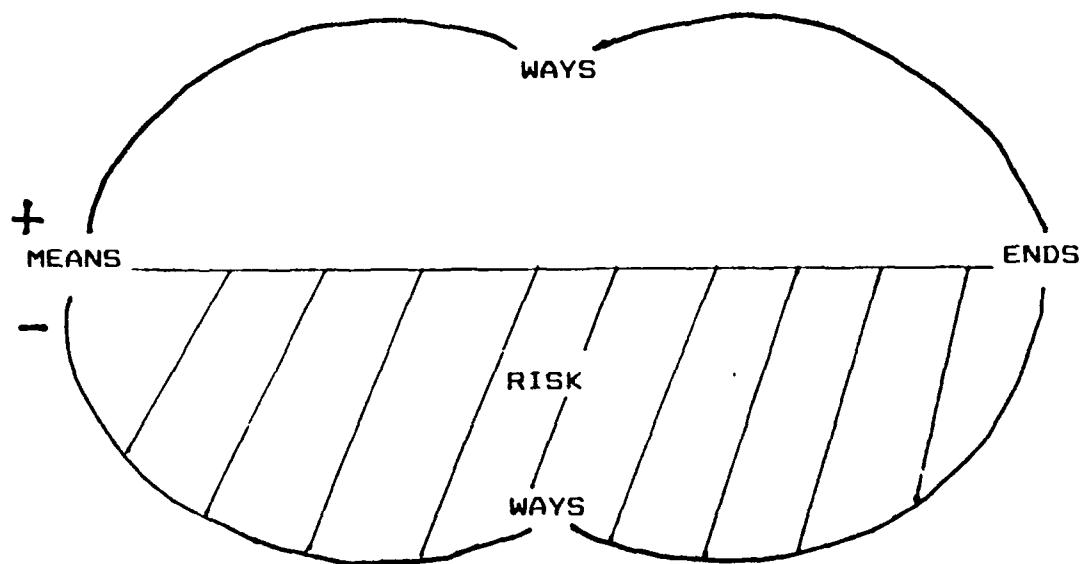


FIGURE 1.¹³

Risk in Relation to Ends, Means, and Ways

When disparity occurs in combat power which cannot be compensated for by ways, a certain amount of friction will result. Risk then becomes "a measure of that friction in problemistic terms."¹⁴

The theoretical concepts presented represent a framework and reference for the analysis in this paper. Critical to this framework are the elements of

criteria: strategic setting, ends, means, ways, and risk. The combined effect of these elements provide for the operational concepts which are the focus of this monograph.

III. FORWARD DEFENSE

STRATEGIC SETTING

Since the end of World War II the centers of superpower conflict in the world have been the Soviet Union and the United States. The focal point of this conflict has been Western Europe. Terms such as containment, flexible response, arms race, satellite nations, hegemony, expansionism, and detente' served to describe the issues and relationship between the Soviet Union and the United States in the cold war era.

Conflict between the two has occurred around the globe, but Central Europe has always been the point of the spear. Events such as the Berlin crisis and invasions of Hungary in 1956 and Czechoslovakia in 1968 are illustrations of this superpower conflict in action. A review of the strategic situation provides a context for understanding the threat.

"Cold War" is the term used to describe the environment or relationship between the Soviet Union and the United States in the post World War II period. At first glance, the beginning of the cold war

phenomenon is curious when one considers that both nations were allies in World War II. The reality is that both sides were extremely suspicious of each other and that the alliance was born more out of necessity than any altruistic rationale.¹⁵ In fact "there had never been a shared vision of the postwar order among the Big Three, [the United States, Great Britain, and the Soviet Union] and many of the issues that reflected the deeper divisions in world views had simply been resolved *de facto* or postponed for later consideration."¹⁶

One of the first results of the cold war was the creation of the bi-polar world, a term given the grouping of nations along economic, political, and military lines. Inclusion in one group, as in the case of most East European countries, was not necessarily a function of choice. The formulation of two major groups led to the creation of a strategy which the United States has embraced for most of the cold war period, containment.

Containment is the product of a concept originally devised by George Kennan. Kennan's concept derived from his analysis of Soviet desires and intentions after World War II.¹⁷ Kennan's concept reflected a "strategic vision...seeing relationships between objectives [ends] and capabilities [means]."¹⁸ This

concept which asserted US interests, both economic and political, was best served by a global equilibrium... maintained through economic activity but supported by military activity if necessary."¹⁹ According to John L. Gaddis, noted strategist, historian, and educator, "Kennan objected vigorously to the notion that the United States had to resist communism wherever it appeared."²⁰ Containment was the base concept for a host of many strategies which evolved out of the cold war era. Among the most notable are: Eisenhower and Dulles' "New Look", Kennedy and Johnson's "Flexible Response", and Nixon and Kissinger's "Detente". All were attempts through political, economic and military means to maintain the equilibrium Kennan sought to achieve. These efforts at the strategic level provided for the focus of effort at the operational level.

Conflict between the Soviet Union and the United States existed in a strategic environment with a global setting, yet the primary focus remained Central Europe. An operational concept for NATO had to support this focus. The analysis of the ends, means, ways, and risk will demonstrate how forward defense met that focus.

ENDS

The defense of Europe is the desired end, both at the strategic and operational level. Within the simple

statement of defense of Europe lies the intricate and complex nature of US interests and those of the NATO allies.

The strategic end for the United States is preservation of our national interests and the continued function of deterrence.²¹ In the event deterrence should fail, the end becomes the ability to "repel or defeat military attack and end conflict on terms favorable to the United States, its interests and allies."²² The end at the strategic level directly corresponds with that on the operational level. The desired end at the operational level is to deter any aggressor and, should the deterrence fail, defeat the attack and end the conflict on terms favorable to NATO. Since the only force threatening NATO included the Soviets and its client states, the focus of the end during the cold war period has been the Warsaw Treaty Organization (WTO).

During the Cold War era, the WTO was an identifiable threat in terms of the size, composition, and offensive doctrine of the WTO. The threat became a critical consideration in defining NATO's end and the subsequent adoption of forward defense as the operational concept. One significant element of this consideration was the size advantage enjoyed by the WTO over NATO. Size however, was only one of many advantages enjoyed

by the WTO.

By the end of the cold war era, the WTO enjoyed certain advantages, in addition to size, over NATO. Those advantages included: most of the Soviets' armored and tactical air forces were in Eastern Europe, Soviet hegemony over Eastern Europe allowing for unincumbered use of territory and facilities, and the bulk of Soviet forces in Western USSR were heavily armored and motorized rifle divisions.²² These advantages had obvious implications for WTO mobilization and surprise of NATO. Advantages held by the WTO, both real and perceived, throughout the cold war era had a profound affect on how NATO looked at achieving its desired end. This perspective on the relationship between the threat and the desired end is evident in means devised to address the threat.

MEANS

Forces provided by the alliance members comprise the principal means available to NATO. The means also encompass a wide array of elements, some more tangible than others.

When discussing means, one must use caution in determining capability on mere numbers alone. Capabilities are drawn from a multitude of sources: force size, structure, doctrine, and degree of modernization to name a few. A sticking point which

plagued both inter and intra alliance negotiations was the assessment of capability. This issue relating to means was never resolved in the pre CFE environment. An additional problem for NATO in assessing alliance means was burdensharing.

The main point within the alliance centered over what constituted a fair share. This was significant for NATO in terms of maintaining a strong defense against a powerful WTO; in other words, a powerful enemy required a powerful alliance. Richard Perle, former Assistant Secretary of Defense, pointed out in testimony on alliance distribution of means before the House Armed Services Committee (HASC) that the current process lacks a method for adequately illustrating how each member of the alliance "contributes to the security of the rest."²⁴ However, Perle pointed out that "it is difficult to ignore the level of effort that is expressed by the percentage of gross domestic product that the member countries allocate for defense."²⁵

The average contribution in terms of GNP for most Central European countries by the late 1980s was 3%, for the US that figure was about 5%.²⁶ The burdensharing issue had become increasingly divisive within the alliance and a source of heated debate in domestic politics. In addition to burdensharing,

another means in the form of nuclear weapons has been an issue of much debate within NATO.

Nuclear weapons, although not specifically enumerated in this analysis, are a critical means in the attainment of ends for NATO. Nuclear weapons are wed to forward defense through the strategy of flexible response. Conventional forces however, were the focal point of means for forward defense. Figure 2 provides a quick comparison of the forces available to NATO and the WTO in the pre-CFE time frame.

FORCES IN THE EXTENDED CENTRAL ZONE - PRE CFE

	<u>NATO</u>	<u>WTO</u>
MAIN BATTLE TANKS-----	7,800	16,000
ARTILLERY-----	3,000	9,200
AT GUIDED WEAPONS-----	7,100 ¹	11,600
AIRPLANES-----	1,250	2,650
SHORT-RANGE NUCLEAR FORCES ²	1,400	3,000
INTERMEDIATE NUCLEAR FORCES ³	1,435	236

NOTES:

1. Includes all crew served AT weapons including helicopter or vehicle mounted systems, but excludes those that may be fired through the barrel of a tank.
2. For NATO, numbers include LANCE and 100mm and 203mm artillery. For WTO, numbers include PROGESS-II and 152mm, 203mm, and 240mm artillery.
3. For NATO, numbers includes Pershing IIs and GLCMs. For WTO, numbers include SS-4s and SS-20s (warheads as of 31 December, 1985).

FIG. 2²⁷ (Nuclear Forces)²⁸

The force imbalance is obvious. This discrepancy in means was a driving factor in the development and durability of forward defense as a operational concept.

A comparison of the forces in figure 2, demonstrates a significant shortfall in the conventional force ratio between the WTO and NATO. One way of dealing with a significant mismatch in means is to employ a "way," or operational concept, which can offset this disparity and reduce risk. The operational concept employed by NATO was forward defense.

WAYS

Adopting a forward defense operational concept resulted in the AFCENT disposition of forces arrayed in a fashion often described as the "layercake disposition." This view of forward defense is reinforced by the display of corps and divisions stacked along the inter-german border.

One of the foremost criticisms of forward defense was that it was "a static, brittle line subject to quick penetration, rapid tactical defeat, and early resort to nuclear weapons."²⁹ While the criticism has merit, the condition underlying the criticism stems from a significant constraint imposed on NATO operational planners. At its narrowest point, West Germany was only 200 kilometers wide (see figure 3). For domestic political reasons, therefore, West Germany

has resisted any operational concept which gave away any of its territory.³⁰ This constraint in NATO's way was key in the development of forward defense.

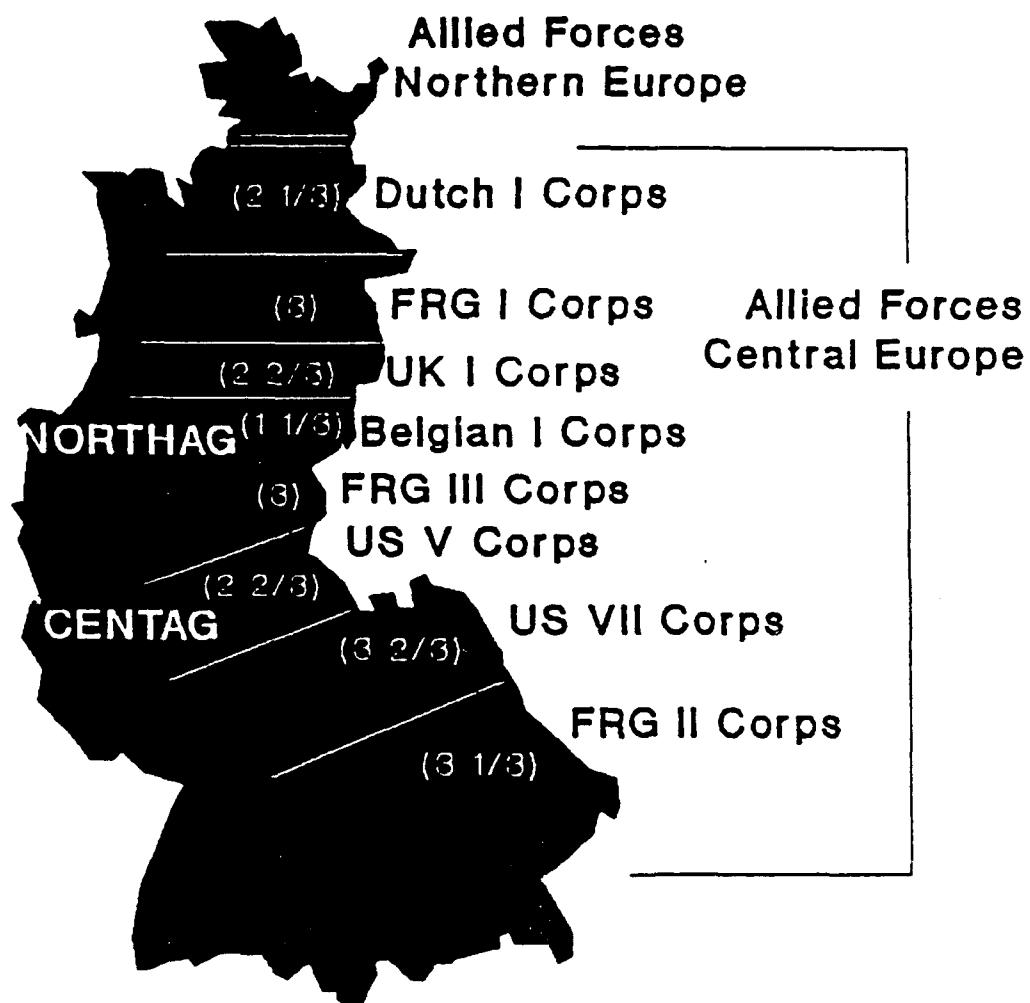
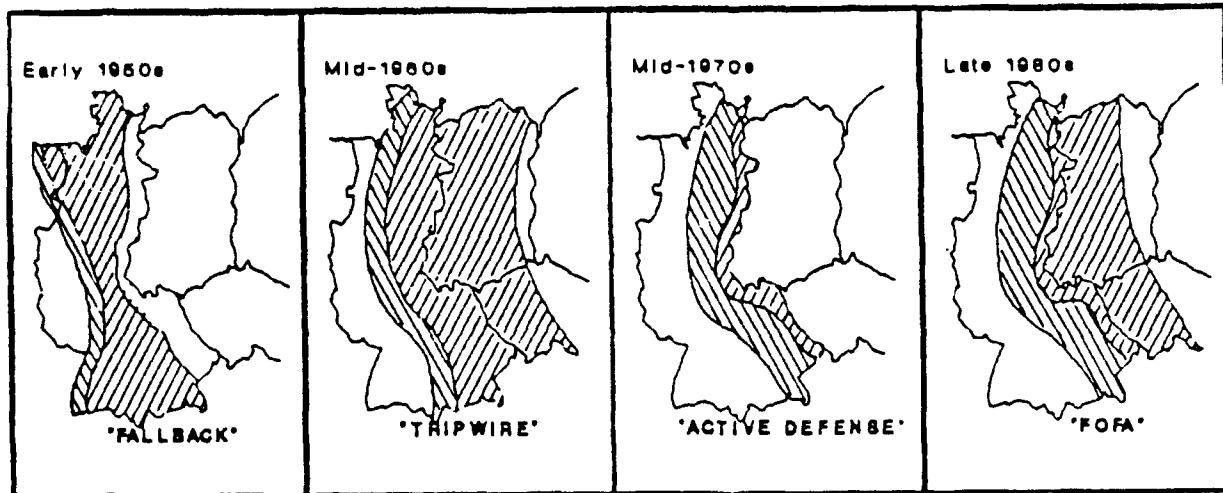


Figure 3.³¹

Division and Corps Configuration Under Forward Defense

By the late 1980s, forward defense had evolved to its present form. At least four distinct phases of development exist, (see figure 4).



Legend: [//] Main Defensive Line [\\] Delaying Zone

Figure 4.³²

Development of Forward Defense

Defense analyst Philip Karber describes the flexibility of forward defense and its ability to embrace different concepts over time as a evolutionary process.³³ The mid 1960s saw an increase in the West German army and the introduction of over 7,000 tactical nuclear weapons.³⁴ This addition provided NATO with greater capability resulting in better force ratios. This increase in means provided NATO more firepower in the "delaying zone."³⁵ Under this trip wire concept, the main defensive belt was positioned at considerable depth from the inter-german border.³⁶ The increase in depth was not significant enough to change the layercake description, nor did it impact the

requirement to defend well forward.

In the 1970s, "active defense" characterized the main defensive belt along the length of the border. One fundamental problem with active defense was that it moved the forward line of defense closer to the border, thereby shortening the delaying zone.³⁶

NATO planners believed that by employing advanced technology weapons and deep strike conventional weapons, they regained greater depth in the delaying zone.³⁷ "Follow on Forces Attack" (FOFA), became part of the Air Land Battle doctrine, which is the United States' concept to defeat a Soviet echeloned attack in the Central Region. This all demonstrates the conceptual flexibility and evolving nature of forward defense.

Forward defense has evolved as an operational concept within the context of NATO's overall strategy to meet the changing NATO environment in the cold war era. The success of forward defense is due to the fact that it fit the strategic situation of the cold war era. Forward defense fit because: the strategic and operational ends were met, it provided a credible defense if deterrence failed, and it employed the available means to attain the desired end. The success of forward defense is self evident.

The absence of war in the cold war era is

testimony to the contribution of forward defense to peace in Europe, notwithstanding its inherent weaknesses and critics. The focus of critics of forward defense point out that the risk NATO incurred while employing it was greater than it should have been.

RISK

The shortfall between the means and the end is risk. Risk in the Central European area of operations is most often associated with two considerations, correlation of forces and surprise attack by the WTO.

NATO was out numbered (see figure 2), but the combination of means available and the way NATO deployed them, forward defense and flexible response, presented the WTO with a situation where "NATO's Central Region forces were strong enough to provide an adequate level of deterrence and defense."²⁸ The viability of this deterrence and defense created a situation where the element of risk for the aggressor was too great. For the WTO, the situation resulted in a potential response from NATO that was more dangerous than the object of aggression was worth.²⁹ This view is not universally accepted, due in large measure to the element of surprise.

Clausewitz wrote that the element of surprise is "more or less basic to all operations, for without it

superiority at the decisive point is hardly conceivable."⁴⁰ For NATO, a principal source of risk was the WTO's ability to launch a major ground attack with little or no warning. The concern over the WTO's ability to mass at the decisive point has concerned NATO for most of the cold war period.

The ability to accomplish a surprise attack on NATO centers on two basic considerations: WTO's ability to deceive NATO as to its intentions, and the inherent weakness in the NATO decision making process. The degree of ambiguity need not be great to be effective. Richard Betts, a senior fellow in the Brookings Foreign Policy program, points out that "skepticism about Soviet intent to attack need not prevail to be damaging, it need only delay [a political decision by alliance members.]"⁴¹

Ambiguity and inherent problems associated with decision-making within a coalition, combined with force level imbalances provide a situation where NATO faces risk in terms of an end-means mismatch. The mismatch becomes increasingly significant as one descends from the operational level to the tactical level. Risk although ever present, is the wild card in operational design when evaluating ends, means, and ways.

SUMMARY

One of the main legacies from the Post World War

II era was the creation of a bi-polar world. This environment and resulting antagonism between the two great super powers, the Soviet Union and the United States, led to the cold war. In response to this environment, both sides formed coalitions. The purpose for each coalition was one of defense. In the case of NATO, the desired end was and continues to be deterrence of aggression, and failing deterrence, conclusion of conflict on terms favorable to NATO and its coalition partners.

The means employed to accomplish the end, defense and security, in NATO's Central Region were a combination of conventional and nuclear forces. The way was an operational concept called "Forward Defense". Forward defense met the requirements of the cold war era. As an operational concept forward defense fulfilled the strategic-tactical linkage and prevailed for over 20 years. However, the relevancy of the past is now in question. Monumental changes are ongoing in the European theater, and globally as well.

The character of Europe today is one of change and unchartered transition. The thinly veiled vestige of legitimacy claimed by the Soviet Union on behalf of the workers of the world may well have fallen with the Berlin Wall. The realities and assumptions upon which forward defense evolved are no longer valid. The

strategic situation is changing, so are the means; the conclusion that seems to follow is that NATO's operational concept must change as well.

IV. AN ALTERNATIVE OPERATIONAL CONCEPT

STRATEGIC SETTING

What has changed from the status quo of the Cold War era? First and foremost, the old threat is gone. The clearly identified Soviet threat and the Warsaw Pact no longer exist. The unilateral reductions that have already occurred and the projected CFE reductions radically change the force posture picture. The uncoupling of the Eastern European nations from the Soviet Union created a great surge of economic and political activity.⁴² National policies, national military strategies, and regional operational concepts which served national interests for decades now lack relevancy. Even the term "Cold War," once used to describe the condition of conflict between the United States and the Soviet Union, is another victim of the changing environment.

The global environment, defined in terms of the bi-polar world is also gone, leaving an undefined replacement. When the Soviet Union set adrift the East European satellite nations, a great strategic opportunity presented itself and a great political

transformation began, raising questions about the future of Europe and the relevancy of NATO. The reunification of Germany is arguably the most dramatic change in Europe to date. This event is connected to the demise of the Warsaw Pact and increased the prospect for a united Europe. Once united politically and economically, conditions will exist for a more powerful Europe on the world scene thereby impacting NATO's desired ends.⁴³ Outside of Europe, major changes are also ongoing.

The breakdown of the old world order leaves the policy of containment with nothing to contain. The economic collapse of the Soviet Union has caused its expansionist policies to lack efficacy.⁴⁴ The Soviet Union continues with its economic and political struggle of crisis proportions, a struggle lacking clarity in method or objective. However, in spite of its internal turmoil, "while its ultimate resolution is far from clear, US-Soviet relations are on a new footing and extraordinary progress has been made on a broad range of initiatives."⁴⁵ The political and economic transformation of former Soviet block nations are as significant as the changes in the Soviet Union. As positive as these changes are, new questions arise as to security issues from a more global perspective.

The end of containment and the bi-polar world

order has brought new challenges and potential threats to the world community in ever-expanding forms. The new strategic situation in NATO places new requirements on whatever operational concept NATO adopts. The new concept must support the emerging NATO strategy of actions during peace, crisis, and war. Problems persist in the third world. Problems exist in the form of economic depravation and ecological destruction.

"Unless improved, such conditions often lead to insurgencies, terrorism, drug-running, and nationalistic fervor."⁴⁶ It is clear to NATO that third world problems will have greater impact on its interests. East-West relations are in a dynamic process of change, change which requires nonprovocative actions from NATO. This requirement must appear in NATO's operational concept. The monumental changes which signaled the end of the cold war, combined with the dynamic nature of the current environment, give rise to many new quetions about NATO's purpose and mission. Foremost among the issues confronting NATO are concerns with determining the alliance's desired end.

ENDS

Changes in the geopolitical environment in Europe within the last two years have set in motion dramatic changes which have forever transformed NATO. The

desired end for NATO was deterrence and defense of the alliance, but as the environment changes, so must the end. Supreme Allied Commander, Europe, General John R. Galvin recently stated that if a crisis were to occur, NATO would "manage them in a politico-military way."⁴⁷ General Galvin went on to emphasize that at the heart of the new planning concept for potential NATO activities were actions during peace, crisis, and war.⁴⁸

General Galvin's comments underscore the fact that the end now is not just to deter and defeat. Rather, the end is to prevent war by actions taken during peace and crisis. Peace actions consist of: nonprovocative military actions, collaboration with former enemies, and military exchanges. The focus of peace actions are to build trust, or at least defuse mistrust. The focus of actions during the crisis phase are to use minimum force prior to a crisis developing into war. Actions here may include show of force or demonstrations. The context of the end within peace, crisis, and war clearly signal a change from the cold war era.

This change is underscored by the fact that the end is more complicated now, and NATO is placing greater emphasis on ends beyond the traditional ones that governed forward defense during the cold war era. The end now includes attempts to build economic,

political, social, cultural, and even military ties with former Warsaw Pact countries. There is an increasing focus to resolve crises short of war, and only afterwards to focus on the traditional defense. In fact, NATO is clearly down playing its military role. However, in spite of this shift, there still exists a military threat to NATO.

Unilateral force reductions combined with expected CFE compliance create a much different but not benign Soviet Military. What remains, potentially, is a less formidable Soviet military and a Soviet Union clearly focused on domestic problems. The Soviet Union continues to modernize and maintain the largest land army in Europe. Most important, however, is that the Soviet Union remains the only country capable of destroying the United States. CIA Director William Webster affirmed this in testimony before the Senate Arms Services Committee on 23 January, 1990: "as a result of unilateral cuts, Soviet and Warsaw Pact strength and capabilities have declined....We can probably expect a continued diminution, but not elimination, of Soviet threats to US interests."⁴⁹ This translates into a foe which is less threatening.

A post cold war era operational concept must be capable of defending against the radically changed but continued threat of the Soviet Union and within the

context of the other ends of a contemporary NATO. In the post cold war era, NATO may find its operational objective beyond what has been its traditional focus.

The NATO Handbook states that:

the North Atlantic Treaty consists of a framework for broadly based co-operation between the signatory countries. It is not solely a military alliance designed to prevent aggression or to repel should it occur; it permits continuous co-operation and consultation in political, economic, and other non-military fields.⁵⁰

In reality NATO has maintained a conservative military course in which its actions were bound by the borders of the member nations. The environment which has made this possible may well be passing.

The emerging ends for NATO are clearly developing beyond the narrow focus of the cold war era. Which ever new operational concept NATO adopts, at a minimum it must meet three basic requirements. First, it must continue to provide a credible deterrence and defence against a tenable threat. Second, expansion of NATO's interests to economic, political, social, cultural, and possibly military relations with former adversaries, have expanded NATO's desired ends. The expansion of interests, ends, and potential for expanding interdependence signals an extension beyond the traditional confines of NATO borders. This extension suggests an out-of-area role for NATO forces to meet these new ends. Third, an emphasis on political

solutions, a military which presents a nonprovocative image, and a deemphasis on military solutions are a major shift from a focus on deterrence and defence.

The cold war ends are changing and as contemporary replacements become identified, certain principles of operational design remain applicable. Chief among them is that sufficient means are necessary to meet the desired end.

MEANS

The CFE force level reductions will have a dramatic impact on means available to NATO as well as the Soviets. Arms control negotiations and resulting force reductions are the most significant considerations in terms of the means available to NATO in conducting operations at the operational level. The elimination of an entire class of theater nuclear weapons under the INF Treaty was a positive action for European stability (see Fig.2). An imbalance in short range nuclear weapons remains in the Soviets favor. In spite of this imbalance, the focus of current arms control efforts are conventional forces.

Conventional ground forces remain the most tangible expression of intent and capability. By 1994, NATO conventional forces will most likely take shape in the form of multinational corps.⁸¹ Multinational corps will have requirements for

interoperability in doctrine, equipment, and command and control beyond current NATO interoperability requirements.⁵² A greater reliance on reserve component forces is also expected by NATO, given budgetary constraints and the CFE process.⁵³

Shown in Figure 5 are the conventional force levels for treaty limiting items (TLIs) proposed in the CFE Treaty.⁵⁴

CFE LIMIT	
Tanks	
Per alliance-----	20,000
Largest nation-----	13,300 ⁵⁵
Artillery	
Per alliance-----	20,000
Largest nation-----	13,700 ⁵⁶
Armored CBT VEH	
Per alliance-----	30,000
Largest nation-----	20,000
Airplanes	
Per alliance-----	6,800
Largest nation-----	5,150
Helicopters	
Per alliance-----	2,000
Largest nation-----	1,500

NOTES:

1. Excludes holdings of former GDR forces, which will be counted against NATO limits as part of the forces of unified Germany.
2. Because of negotiations among [former] Warsaw Pact members, the limit on Soviet tanks will be 13,150.
3. Because of negotiations among [former] Warsaw Pact members, the limit on Soviet artillery will be 13,175.

Figure 5.⁵⁷

One of the most significant aspects of the CFE force levels is the removal of the WTO's long standing ability to conduct a successful surprise attack against NATO. However remote, the possibility of a surprise

attack remains. The CFE process is not without its detractors and related potential problems which impact on NATO's means remain.

Johnathan Dean, a renowned US arms control negotiator noted problems with the current CFE agreement: "most West European members of NATO are apprehensive about linking the future force level of their armed forces after a first CFE agreement...to the sinking level of East European or Soviet forces in Central Europe."⁵⁶ This concern is based on the fear of a "reoccurrence of a more negative Soviet Policy."⁵⁷ Notwithstanding CFE's verification regime and NATO's robust intelligence system, a reversal in Soviet intentions could make NATO's means inadequate. The CFE treaty process, aside from the obvious impact on conventional force levels, is influencing other alliance issues as well. Foremost among them is burdensharing.

Burdensharing continues as an ongoing alliance issue which will impact on the means available to NATO. Disagreement over who is to provide what will become more acute in an environment of reduced threats and shifting economic priorities. The current levels of contribution will probably change in the near term as countries attempt to cash in on the so called "peace dividend." It is not unreasonable to assume however,

that depending on the rate of force reductions by the Europeans, "they may well equal or surpass US contribution as a percentage of GNP by the end of the decade."⁵⁰

The means available to NATO will remain predominantly conventional but will continue to include nuclear weapons. NATO's new operational concept must account for this as well as other issues influencing NATO's means. Burdensharing is such an issue, and will continue to be divisive for the alliance. The expected parity of conventional forces in Europe clearly eliminates many of the force imbalance problems of the cold war era. What confronts NATO in this period of transition is arranging the forces that are available in a fashion which is in concert with the ends and means. Multinational corps represent both a way and a means. They are a means in terms of the forces they represent and a way in terms of how they're deployed. Associated with multinational corps are a host of interoperability issues which require attention. Those issues include: doctrine, equipment, logistics, and command and control. Due to the CFE draw downs and alliance members attempting to cash in on the peace dividend, NATO will increase its reliance on reserve component forces. The greater reliance on reserve component forces adds to mobilization time and raises

additional questions of interoperability effectiveness and readiness. The requirements for NATO's new operational concept prescribe the need for a way NATO can apply the means available toward the emerging ends in a period of transition and uncertainty.

WAYS

Any replacement for forward defense must address the emerging characteristics of the strategic situation, ends, and means of NATO's new environment. One alternative way available as a replacement for forward defense is resilient defense.

The operational concept entitled resilient defense is a descriptive term for a concept that is briefly capable of absorbing small to large penetrations and then rejecting them.⁵⁹ An operational concept currently under consideration by NATO, entitled mobile counter concentration defense, is by all accounts very similar to resilient defense. In more detail, the operational concept of resilient defense is designed:

primarily for force-on-force maneuver, it is anchored by a relatively deep area defense with the mission of both forcing an opposing force to reveal his main effort and causing significant attrition in his attacking force. It relies initially on existing force structure and weapons, but allows for force restructuring and modernization.⁶⁰

Resilient defense consists of three defensive belts: a forward belt, a maneuver belt, and a rear area belt.

The first belt, or forward belt, has a depth of

about 50 kilometers (see Figure 6).

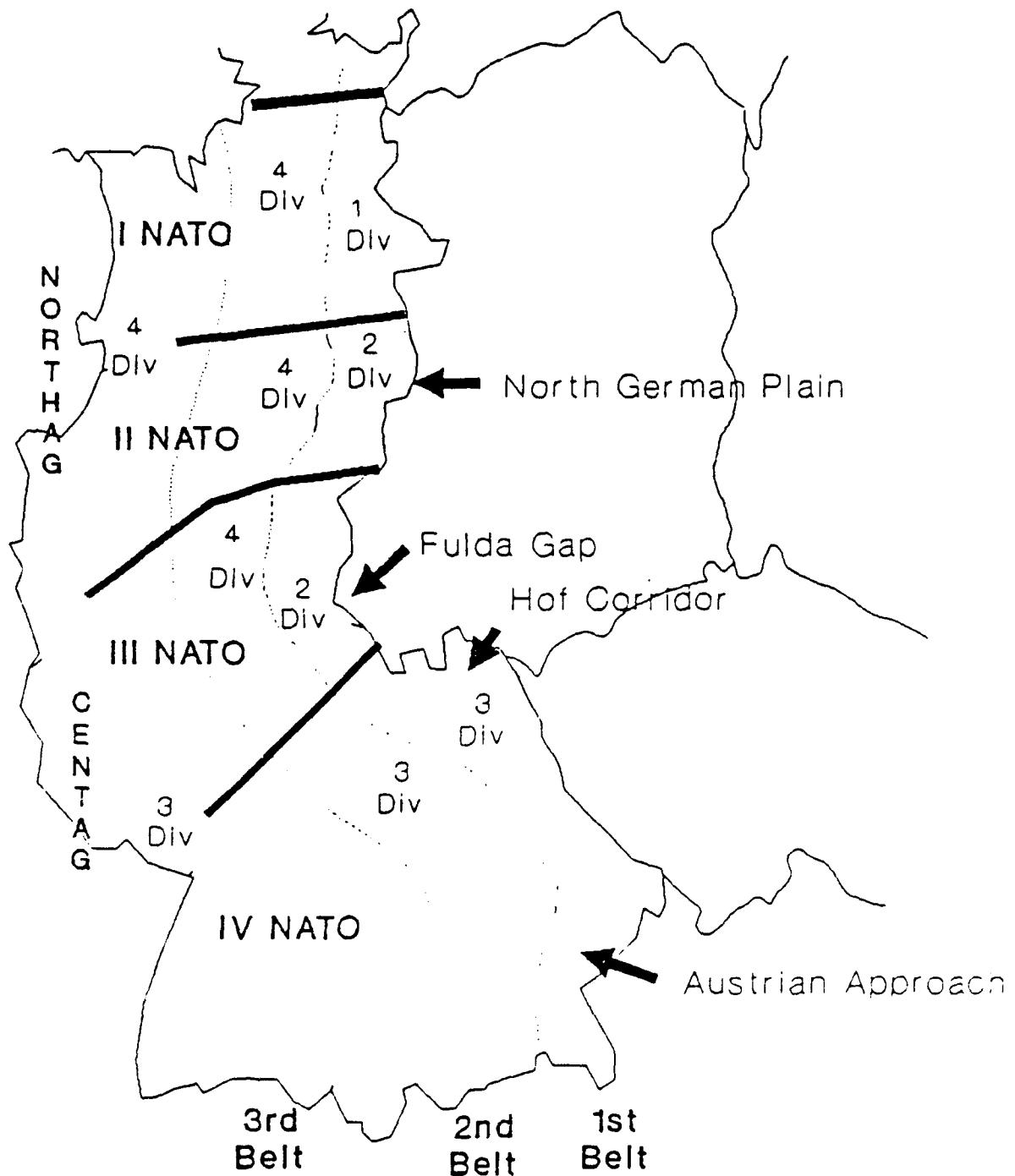


Figure 6.⁴¹

NOTE: Terms of the German reunification treaty stipulated no NATO forces would be stationed in the former GDR.

Its purpose is similar to a traditional covering force mission: canalize the enemy, strip away his reconnaissance, and force him to reveal his main axes of attack. The forces envisioned for this belt will conduct an area defense throughout the depth of the belt. Penetrations are anticipated, but forces in this belt will hold the shoulders of any penetration, reduce the enemy and force commitment of second echelon forces (see figure 6). Finally forces in this belt are expected to set the conditions for counter attack by forces in the next belt.⁶²

Forces in the first belt will require a degree of diversity driven by terrain and mission. Light forces operate in difficult terrain which is interspersed throughout the region. The forces will require a certain degree of mobility, which may include a wheeled light armored vehicle. AT weapons needed must be capable of defeating Soviet armor to include the T-80.⁶³

This belt will also include mechanized and armor units as well as forces pushed forward from the second belt. Adequate fire support and combat service support are necessary. The first belt will consist of a mixture of active and reserve forces. With expected increased warning times, there appear to be less risks with mobilization.⁶⁴ These forces will set the

conditions for the second belt.

The second belt, or maneuver belt, may have a depth of up to 150 kilometers. Within this belt will be highly mobile counter attack forces, "the primary forces remaining in NATO after troop reductions."⁶⁵ These forces must stop the enemy penetration of NATO territory. The counter attacking forces' mission is to "blunt the penetration by severing the attacking forces logistical support, destroying his combat forces, rejecting the attack, and restoring the defensive line."⁶⁶

In up to corps sized forces, units in the maneuver belt will represent a mix of active and reserve forces. The force mixture envisions a "balance of West German and allied units."⁶⁷ Mobilization will continue to be an issue of concern, the expectation is the German mobilization for forces needed in this belt will require one week.⁶⁸ Additional heavy forces in this belt will include the remainder of the alliance forces. Reinforcing US forces falling in on POMCUS material will also, at least initially, belong to this belt.⁶⁹ Both the first and second belts will require logistical from the third belt.

The third and final belt will consist of operational reserves, combat service support and rear area security forces. This zone, defined by the depth

of the second zone, will occupy much of the urbanized area of Germany.⁷⁰ German Territorial and light infantry forces will provide the security in this zone, although mobility will be a problem. For requirements beyond the capability of third belt, forces from the second zone could be drawn to support actions as necessary.⁷¹

If resilient defense is to be a successful replacement for forward defense, it must accommodate the changes in the ends and means without incurring unacceptable risk while presenting a nonprovocative image. In addition, the shift from a linear forward defense focused on the old IGB with corps shoulder to shoulder, to one of nonlinearity and greater depth must take place. The employment of multinational corps as a way within this nonlinear environment is also a requirement. However, even if the pieces fall into place as envisioned, the element of risk is still present.

RISK

The risk for resilient defense in the traditional sense is not unlike any other operational concept in terms of means not sufficient to support the desired end. However, in the context of this analysis, a risk assessment cannot be made until the completion of analysis of resiliant defense. The final discussion of

risk will occur in the conclusion section.

SUMMARY

The environment of the Cold War era has changed and that process continues. The political, economic, and military conditions which supported Forward Defense no longer exist. The ends are no longer as clearly defined as before. The means required cannot be defined until the end is defined. Deterrence and defense of NATO became a lesser end in a new environment stressing economic, political, and social relations with former adversaries.

The means have changed radically and continue to do so as ongoing CFE and SNF negotiations continue. The element of risk lies as much in the unknown of potential ends and means as it does in a short fall between the two. Characteristics of the new environment provide for some initial conclusions about the ability of resilient defense to replace forward defense as NATO's operational concept.

V. CONCLUSIONS and IMPLICATIONS

Events unfolding in the last two years clearly mandate a change in the way NATO does business. NATO's strategy of forward deployed forces and flexible response proved to be credible and successful. The environment however is changing and with it NATO must

change as well. Requirements for a new operational concept are illustrated in Figure 7.

REQUIREMENTS FOR NATO'S NEW OPERATIONAL CONCEPT

STRATEGIC SETTING:

- Third World focus
- operations within emerging strategy of peace-crisis-war

ENDS:

- continued requirement to deter and defend
- focus on economic, political, social, and cultural relations leading to out of area operations
- deemphasis of military operations - nonprovocative image

MEANS:

- continued dominance of conventional forces, fewer forces, and retained reliance on nuclear weapons
- burdensharing
- multinational corps - interoperability issues
- increasing reliance on reserve forces

WAYS:

- flexibility within a changing environment
- multinational forces
- nonprovocative image
- out of area capability

Figure 7.

The strategic situation is undergoing significant changes. The emerging environment is one of continual change, uncertainty, and growing interdependence. With in this strategic environment, two major issues emerge for NATO. First, the expanding interest into the Third World, and second, the alliance's emerging strategy of peace, crisis, and war.

Resilient defense is flexible enough to meet a wide range of requirements. What remains unanswered for NATO in terms of resilient defense is how, if at all, resilient defense can address ends presented by Third World interests. As these interests become clearer, so will the operational concepts' role in the

new strategic setting and NATO's strategy.

Resilient defense meets NATO's requirements within a peace, crisis, and war strategy. In times of peace, crisis prevention is key. Resilient defense will help in the area of military exchanges creating better understanding and cooperation. During time of crisis, resilient defense will help manage a crisis through standing forces and collective resolve from multinational forces. The requirement for crisis resolution in time of war will be met by the active and reserve forces envisioned in resilient defense. Resilient defense is as good as any operational concept currently envisioned for NATO, and as the strategic situation becomes clearer so too will NATO's ends.

For NATO in as much as the ends are changing, they also remain the same. NATO must retain the ability to deter and defend. Resilient defense appears capable of supporting this end so long as the trends, particularly concerning the Soviets, outlined in the strategic situation continue. The risk for NATO in adopting resilient defense lies in the possibility of those conditions changing.

New ends for NATO deemphasize the role of the military and increase focus on economic, political, social, and cultural actions. The expansion of interests and ends signals extension beyond the

traditional confines of NATO borders suggesting an out of area role for NATO forces. At best it is not clear at this point how resilient defense or any like concept will support an out of area mission beyond a small mobile force currently available in NATO.

What is clear however, is an emphasis on political solutions and a deemphasis on military solutions, driven by the requirement for a concept which presents a nonprovocative image. This is a difficult requirement to fill. However, the belt system in resilient defense with a majority of combat forces stationed away from borders meets this requirement. Resilient defense meets many of the requirements of the new and emerging NATO ends, but not all.

The means are undergoing a dramatic change in NATO. Four areas impact on resilient defense's ability to meet NATO's requirement as an operational concept. Foremost are CFE and its efforts to reduce conventional forces which remain key to NATO's future, and the relationship with nuclear weapons. Resilient defense is not divorced from nuclear weapons and will continue to rely on them. Implications are that they will remain a part of any operational concept for NATO in the foreseeable future. Resilient defense can function with NATO's conventional and nuclear means, as currently envisioned, to meet anticipated ends. The

obvious exception is the already discussed out of area mission and care must be taken in other areas to ensure potential shortfalls do not arise.

Next, burdensharing issues will continue to be divisive for the alliance. Resilient defense has the flexibility to accept changes in levels of contribution of member nations, but not major reductions.

Multinational corps are the third area, and in essence are both a means and a way. The corps are means in terms of the forces they represent, and a way in terms of their employment. Implications for the effectiveness of resilient defense, with regard to multinational corps, include the requirements for standardized doctrine, equipment, logistics, and command and control. Finally, implications for increased reliance on reserve forces in the form of mobilization time and readiness, must be addressed by NATO to ensure resilient defense can function fully as a way and corresponding risk is acceptable.

Resilient defense must possess four characteristics to meet NATO's requirements for matching ends and means. First, the requirement for flexibility in a evolving environment is met by resilient defense's nonlinear employment. Resilient defense is also capable of accepting NATO's changing means and still provide a functional operational way.

Secondly, resilient defense is a viable way for NATO to apply its decreasing means toward diverse, and in some cases, undefined ends. By employing multinational corps within the belt concept, resilient defense provides a deterrent and credible defense for NATO. This method of employment envisioned by resilient defense meets the requirement of the nonlinear environment.

Thirdly, a key problem which has plagued strategy and operational concept designers is how to create a concept which is not provocative to the potential enemy; in other words, a defense which is not overtly offensive. After all, NATO's emerging new strategy stresses actions during peace and crisis management, and an operational concept must support the emerging strategy. There are however, obvious problems in supporting such a strategy as Chris Bellamy, author and strategist, points out: "a purely defensive posture which eschews all offensive means in order not to appear provocative would theoretically be ideal for NATO, but in practical military terms the difficulties appear insufferable."⁷² This operational concept meets the requirement for a credible defense through method of employment and type of forces, yet poses the least provocative posture possible within the strategy of peace, crisis, and war.

operational concept. However, a shield of blows may not be NATO's primary need. Concerns surrounding the feasibility of multinational corps with their interoperability issues and the increasing reliance on reserves pose questions for an out of area capability. Out of area requirements may well involve operations at the lower end of the operational continuum in third world countries. Resilient defense, at this point in time does not address this possibility. This issue combined with the already identified concern for future Soviet actions, pose the greatest risk for NATO in adopting resilient defense.

Not with standing the identified risk, resilient defense provides NATO a viable operational concept in a time of great transition and uncertainty. In light of forward defense's obsolescence, NATO would benefit from adopting resilient defense as its operational concept.

ENDNOTES

1. "Warsaw Pact has an Unceremonious End," The Kansas City Star, 26 February, 1991, sec A, p. A1.
2. JCS Pub 1-02, DOD Dictionary of Military and Associated Terms, (Washington, DC, 1987), p. 244.
3. Ibid.
4. U.S. Army, Field Manual 100-5, Operations, (May, 1986), p. 10.
5. Michael Howard, Clausewitz, (Oxford, Oxford University Press, 1983), p. 35.
6. JCS PUB 1-02, DOD Dictionary of Military and Associated Terms, p. 363.
7. James J. Schneider, "Theoretical Paper Number 3, The theory of Operational Art", (Ft Leavenworth, KS School of Advanced Military Studies, 1988), p. 17.
8. Ibid.
9. Ibid.
10. Ibid.
11. Clausewitz, Carl von., On War, Translated by Michael Howard and Peter Paret, (Princeton NJ, Princeton University Press, 1976), p. 119.
12. Schneider, "Theoretical Paper Number 3," p. 19.
13. Ibid., p. 16.
14. Ibid., pp. 18-19.
15. Joseph L. Nogee and Robert H. Donaldson, Soviet Foreign Policy Since World War II (New York, Pergamon Press, 1985), p. 74.
16. Ibid.

17. John L. Gaddis, Strategies of Containment (New York: Oxford University press, 1982), p. 25.
18. Ibid.
19. Ibid. pp. 38-40.
20. Ibid. p. 41.
21. National Security Strategy of the United States (The White House, 1990), p. 2.
22. Ibid.
23. Ibid., pp. 2-6.
24. Richard Perle, Testimony Before the Defense Burdensharing Panel of the Committee On Armed Services House OF Representatives, Washington DC: US Government Printing Office, 1989, p. 84. Hearings held on February 2, and March 2, 1988.
25. Ibid.
26. US Army War College, NATO Armed Forces (Carlisle Barracks, Penn.: US Army War college, September 1989), p. 69.
27. Anthony H Cordsman, NATO's Central Region Forces, (London: Jane's Publishing Co. LTD., 1988), p. 2.
28. Soviet military power, (US Government Printing Office, Washington DC, 1986), p. 37,90.
29. Drew,Nelson; Dayton, K.; Ervin, W.; Keck, B.; and Marcum, P. "NATO Beyond Forward Defense: Facing an Unreliable Enemy in an Uncertain Environment." Unpublished Draft, National Security Program Discussion Paper Series, (Cambridge, Mass., Harvard University, 1990), p. 149. Here after refered to as: Drew et al, NATO Beyond Forward Defense.
30. Johnathan Dean, Watershed in Europe: Dismantling the East - West Military Confrontation (Lexington: Lexington Books, 1987), p. 37.
31. Drew et al, NATO Beyond Forward Defense, p. 146.
32. Ibid.

33. Philip A. Karber, "The Strategy: In Defense of Forward Defense," Armed Forces Journal International (May 1984): 28.

34. Ibid.

35. Ibid., p. 49.

35. Ibid.

36. Ibid.

37. Ibid.

38. Cordsman, NATO's Central Region Forces, p. 1.

39. Ibid.

40. Clausewitz, On War, p. 198.

41. Richard K. Betts, Surprise Attack, (Washington DC: The Brookings Institute, 1982), p. 197.

42. Brian Beedham, "As the Tanks Rumble Away," The Economist, September 1, 1990, p. 3.

43. Ibid., p. 4.

44. Ibid., pp. 5-9.

45. _____, "United States Military Strategy: The Role of American Armed Forces in a Changing World Order" Draft Working Paper, (FT Leavenworth, KS School of Advanced Military Studies, 1991), p. 3.

46. Ibid.

47. John R. Galvin, "NATO Shifts Toward Crisis Management; Europeans Consider Regional Alliance, Armed Forces Journal, (April, 1991): 34.

48. Ibid.

49. Patrick E. Tyler, "CIA's Webster Says Soviet Military Threat Declining," Washington Post, 24 January, 1990, p. A4.

50. NATO Handbook (Brussels: NATO Information Service, [1979]), p. 15.

51. John R. Galvin, "Geopolitical Turn of Events Affect Military Balance", The Officer, July 1990, p. 18.

52. Current NATO doctrine is defined in Allied Tactical Publication (ATP)-35(A). Revised in 1983, the doctrine covers combined arms operations from brigade level and up to include considerations for multinational operations and potential changes within NATO. Revision of this document is expected in light of recent changes discussed in this essay.

53. Galvin, The Officer, p. 17.

54. The TLIs are the five conventional weapon systems which are the focus of the CFE treaty, in the Atlantic to the Urals zone (ATTU). The five systems are: tanks, artillery, ACVs, fixed wing aircraft, and rotary wing aircraft.

55. Pat Towell, "Historic CFE Treaty Cuts Arms, Marks the End of Cold War" Defense & Foreign Policy, November 1990, p. 3931.

56. Johnathan Dean, "The CFE Negotiations, Present and Future", Survival (July/August 1990): 318.

57. Ibid.

58. Drew et al, "NATO Beyond Forward Defense," p. 177.

59. Ibid., p. 185.

60. Ibid.

61. Ibid., p.

62. Ibid., pp. 186-187.

63. Ibid., p. 187.

64. Ibid.

65. Ibid., p. 192.

66. Ibid.

67. Ibid., p. 195.

68. Marc Fischer, "West German Cabinet Approves 20% Troop Cut," Washington Post, 7 December 1989, p. A1.

69. Drew et al, "NATO Beyond Forward Defense," p. 195.
70. Ibid. p. 196.
71. Ibid. p. 197.
72. Chris Bellamy The future of Land Warfare, (New York: ST Martins Press, 1987), pp. 125-130.

BIBLIOGRAPHY

BOOKS

Bellamy, Chris. The Future of Land Warfare. New York:
ST Martins Press, 1987.

Betts, Richard K. Surprise Attack. Washington DC: The
Brookings Institution, 1982.

Clausewitz, Carl von. On War. Translated by Michael
Howard and Peter Peret. Princeton, NJ: Princeton
University Press, 1976.

Cordsman, Anthony H. NATO's Central Region Forces.
London: Jane's Publishing Company, 1988.

Davis, Jacquelyn K., and Pfaltzgraff, Robert L. The
Atlantic Alliance and U.S. Global Strategy.
Washington DC: Institute for Foreign Policy
Analysis, INC., 1983.

Forester, Schuyler and Wright, Edward N., eds. American
Defense Policy. 6th ed. Baltimore: The Johns
Hopkins University Press Ltd., 1990.

Gaddis, John Lewis. Strategies of Containment. New
York: Oxford university Press, 1982.

Holliday, Fred, The Making of the Second Cold War.
London, 1983. Quoted in Dukes, Paul, The Last
Great Game: USA Verses USSR. New York: ST
Martins Press, 1989.

Kennan, George F. American Diplomacy, 1900 - 1950.
Chicago: University of Chicago Press, 1951.

NATO Handbook. Brussels: NATO Information Service,
[1979].

Nojee, Joseph L. and Donaldson, Robert H., Soviet
Foreign Policy Since World War II. New York:
Pergamon Press, 1985.

Paret, Peter. Clausewitz and the State. Princeton:
Princeton University Press, 1985.

Rubenstein, Richard L., ed. THE DISSOLVING ALLIANCE,
The United States and the Future of Europe. New
York: Paragon House Publishers, 1987.

Sloan, Stanley R., NATO'S FUTURE, TOWARD A NEW TRANSATLANTIC BARGAIN. Washington DC: National Defense University Press, 1985.

The North Atlantic Treaty Organization: Facts and Figures. Brussels: NATO Information Service, 1981.

PAPERS AND ARTICLES

Allen, Ralph L., "Piercing the Veil of Operational Art." Parameters 16, no. 4 (Winter 1986): 23-29.

Banks, Floyd T. and Mendel, Williams W. "Campaign Planning: Getting it Straight." Parameters 18, no. 3 (September 1988): 43-53.

Beedham, Brian, "As the Tanks Rumble Away." The Economist, September 1, 1990, p. 3.

Dean, Johnathan, "The CFE Negotiations, Present and Future." Survival (July/August 1990): 318.

Dobbs, Michael, "Soviet Crusader Against Communism." The Kansas City Star, 7 April 1991, p. K1.

Drew, Nelson; Dayton, K.; Ervin, W.; Keck, B.; and Marcum, P. "NATO Beyond Forward Defense: Facing an Unreliable Enemy in an Uncertain Environment." National Security Program Discussion Paper Series 90-01, Harvard University, 1990.

Fischer, Mark, "West German Cabinet Approves 20% Troop Cut." Washington Post, 7 December 1989, p. A1.

Galvin, John R. "NATO shifts Toward Crisis Management; Europeans Consider Regional Alliance." Armed Forces Journal (April, 1991): 34.

Galvin, John R. "Geopolitical Turn of Events Affect Military Balance." The Officer, July, 1990, p. 18.

Karber, Philip A. "The Strategy: In defense of forward Defense." Armed Forces Journal International (May 1984): 28.

Kennan, George F. (writing as "X") "The Sources of Soviet Conduct" Foreign Affairs (July 1947): 567-568.

Schneider, James J. "The loose Marble - and the Origins of Operational Art." Parameters 19, no. 1 (March 1989): 85-89.

Schneider, James J. "The Theory of Operational Art School of Advanced Military Studies, Theoretical Paper Number 3", Fort Leavenworth, KS: School of Advanced Military Studies, 1988.

Towell, Pat, "Historic CFE Treaty Cuts Arms, Marks the End of Cold War." Defense & Foreign Policy, November, 1990, p. 3931.

National Security Strategy of the United States. The White House, [1990]. "Warsaw Pact has unceremonious end," Kansas City Star, 26 February, 1991, sec A, p. A1.

_____, "United States Military Strategy: The Role of American Armed Forces in a Changing World Order." School of Advanced Military Studies, Ft Leavenworth KS, 1991.

MANUALS

Field Manual 100-5, Operations. Washington, DC: HQ Department of the Army, 1986.

Joint Chiefs of Staff Publication 1-02, DOD Dictionary of Military and Associated Terms, Washington, DC: The Joint Staff, 1987.